

REMARKS

Claims 22, 23, 25, 26, 27, 29, 31, 33, 35, 36, 38, 40, 41, 42, 44, 49, 51, 53, 58, 59, 60, 62, 67, 69, 71, 76, 90, 93, 100 and 108 have been amended and Claims 1-20, 88 and Claims 21, 30, 89 and 107 have been cancelled. Accordingly, Claims 22-29, 31-87, 90-106 and 108-118 are pending in the application. Favorable reconsideration of the application is respectfully requested.

Claims 1-20 and 88, which stand withdrawn as being directed to a non-elected invention, have been cancelled without prejudice. Applicants reserve the right to file a divisional application for the non-elected claims.

The allowance of claims 77-87, 95-106 and 109-118 is noted and appreciated.

Claims 23, 27, 29, 33, 38, 40, 44-49, 53-58, 62-67, 71-76, 90-94 and 108 are objected to as being dependent upon a rejected base claim, but are indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 23, 27, 29, 33, 38, 40, 44, 49, 53, 58, 62, 67, 71, 76, 90, 93 and 108 have been rewritten in independent form and are in condition for allowance.

Claims 45-48 are dependent upon Claim 44, Claims 54-57 are dependent upon Claim 53, Claims 63-66 are dependent upon Claim 62, Claims 72-75 are dependent upon Claim 71, Claims 91-92 and 94 are dependent upon Claim 90. Accordingly, Claims 45-

48, 54-57, 63-66, 72-75, 91-92 and 94 are in condition for allowance along with respective parent claims.

Claims 22, 24-26, 28, 59-61, and 68-70 stand rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 4,108,574 to Bartley et al. Bartley et al. discloses a method of and apparatus for measuring and controlling the instantaneous flow rate of a liquid in a piping system by varying the speed of a centrifugal pump. The apparatus includes a tank, a centrifugal pump, a pump drive, a controller and a plurality of sensors for sensing pump flow, pump speed, power input and pressure in the pipe line, the sensor outputs being applied to the controller for controlling the pump.

Claims 22, 24-26 and 28 have been made dependent upon allowable Claim 29, and thus, are allowable along with Claim 29. Claim 59 distinguishes over Bartley et al. by reciting using values of pump flow rate and speed inputs to a centrifugal pump to calculate values representing pump performance, using the pump performance values to calculate values representing performance of the system and using the system performance values to produce one or more command signals, including deriving a setpoint value for a fluid system performance parameter from a fluid level command, and using the setpoint value in calculating the one or more command signals for controlling the speed of the centrifugal pump.

As is stated in the Examiner's Reasons for Allowance set forth on pages 7-8 of the instant Office Action, the Examiner's reasons for allowance of claim 62 is the recitation

of the limitation "deriving a setpoint value for pump suction pressure from a fluid level command". Accordingly, Claim 59, which similarly recites "deriving a setpoint value for a fluid system performance parameter from a fluid level command" is believed to be allowable over Bartley et al. Claims 60, 61 and 68-70, which are dependent upon Claim 59, are believed to be allowable along with parent Claim 59. Claims 60 and 69 have been conformed to amendments made to Claim 59. Claims 61 and 70 recite the fluid system performance parameter as being pump suction pressure.

Claims 31-32, 34-37, 39, 41-43, and 50-52 stand rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,592,340 to Horo et al. Horo et al. discloses a control system for a vacuum pump used in a paper machine. The vacuum pump is driven by a motor, the rotational speed of which is varied by means of an AC inverter permitting the rotational speed and torque of the pump to be measured. The pump operation is controlled by a central unit on the basis of measuring results.

Claims 31- 32, 34-37 and 39 have been made dependent upon allowable Claim 40, and thus are allowable along with parent Claim 40. Claim 41 is directed to a method of controlling the performance of a fluid system and distinguishes over Horo et al. by reciting using values of torque and speed inputs to a centrifugal pump to calculate values representing pump performance, using the pump performance values to calculate values representing performance of the system and using the system performance values to produce one or more command signals, including deriving a setpoint value for a fluid

system performance parameter from a fluid level command, and using the setpoint value in calculating the one or more command signals for controlling the speed of the centrifugal pump.

As is stated in the Examiner's Reasons for Allowance set forth on pages 7-8 of the instant Office Action, the Examiner's reasons for allowance of claim 44 is the recitation of the limitation "deriving a setpoint value for pump suction pressure from a fluid level command". Accordingly, Claim 41, which similarly recites "deriving a setpoint value for a fluid system performance parameter from a fluid level command" is believed to be allowable over Bartley et al. Claims 42- 43 and 50-52, which are dependent upon Claim 41, are believed to be allowable along with parent Claim 41. Claims 42 and 51 have been conformed to amendments made to Claim 41. Claims 43 and 52 recite the fluid system performance parameter as being pump suction pressure.

In summary, Claims 77-87, 95-106 and 109-118 are allowed and Claims 23, 27, 29, 33, 38, 40, 44-49, 53-58, 62-67, 71-76, 90-94 and 108 are in condition for allowance. Also, Claims 22, 24-26, 28, 31, 32, 34-37 and 39, which have been made dependent upon allowable claims, also are believed to be allowable. Claims 41-43 and 50-52, and Claims 59-61 and 68-70 are believed to be allowable for the reasons given herein. Therefore, Applicants respectfully request entry of the present Amendment and reconsideration of the application, with an early and favorable decision being solicited. Should the Examiner believe that the prosecution of the application could be expedited, the

Examiner is requested to call Applicant's undersigned representative at the number listed below.

Respectfully submitted:

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